INTER-ATRIAL SEPTUM OR SUPERIOR VENA CAVA ELECTRODES FOR ATRIAL DEFIBRILLATION

Abstract of the Disclosure

An implantable system for the defibrillation of the atria of a patient's heart comprises *(a)* a first catheter configured for insertion into the right atrium of the heart, preferably without extending into the right ventricle of the heart; a first atrial defibrillation electrode carried by the first catheter and positioned at the atrial septum of the heart (*i.e.,* an atrial septum electrode); *(b)* a second atrial defibrillation electrode which together with the first atrial defibrillation electrode provides a pair of atrial defibrillation electrodes that are configured for orientation in or about the patient's heart to effect atrial defibrillation, and *(c)* a pulse generator operatively associated with the pair of atrial defibrillation electrodes for delivering a first atrial defibrillation pulse to the heart of the patient. The second electrode may be configured for positioning through the coronary sinus ostium and in the coronary sinus or a vein on the surface of the left ventricle, such as the great vein. An additional electrode configured for positioning in the superior vena cava, right atrium (including the right atrial appendage, or the right ventricle may also be included, and the pulse generator may be configured or programmed for concurrently delivering a first defibrillation pulse through the additional electrode and the atrial septum electrode, and a second defibrillation pulse through the atrial septum electrode and the second electrode. Electrode assemblies and methods useful for carrying out the invention are also disclosed.